

Smooth peas are dominant (S)
Wrinkled peas are recessive (s)

Name: _____
Per: _____
Date: _____

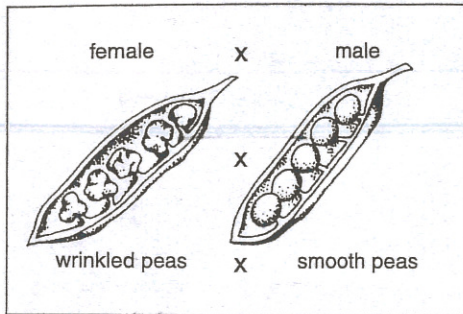


Figure C

Let's see what happens when a pure smooth pea plant is crossed with a pure wrinkled pea plant.

- The dominant smooth genes come from the _____
male, female
- The recessive wrinkled genes come from the _____
male, female

		male gametes	
		S	s
female gametes	S		
	s		

Figure D

- Now fill in the Punnett square for Figure D.
- What kind of covering will all the offspring peas have? _____
smooth, wrinkled
- All the offspring are _____
pure, hybrids

		male gametes	
		S	s
female gametes	S		
	s		

Figure E

- Would there be any difference if the dominant (S) genes were from the female and the recessive (s) genes were from the male? Test it in Figure E.

Answer: There _____ be a difference.
would, would not

		male gametes	
		S	s
female gametes	S		
	s		

Figure F

Now try a cross between two hybrids, Ss x Ss. Fill in Figure F.

- How many offspring will be smooth?

- How many will be wrinkled? _____
- How many offspring will be pure smooth?

- How many will be hybrid smooth? _____

PREDICTING HUMAN TRAITS

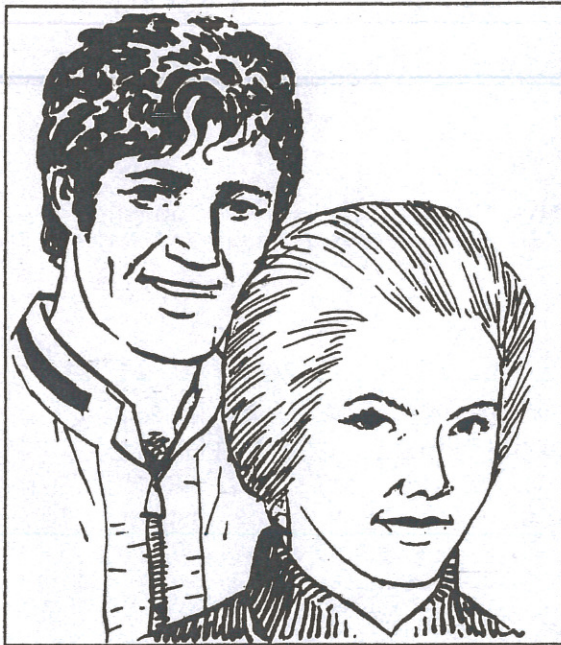


Figure G

Gary and Tina are married. They are planning a family. What will their children look like? Try some more Punnett squares to find out.

Gary is hybrid for curly hair (Cc). Tina is pure for straight hair (cc).

C = dominant curly
c = recessive straight

Gary is hybrid for dark hair (Dd). Tina is pure for blonde hair (dd).

D = dominant dark
d = recessive blonde

Both Gary and Tina are hybrid for brown eyes (Bb).

B = dominant brown
b = recessive blue

Complete the Punnett square for each trait. Then answer the questions.

		HAIR TYPE	
		Gary's gametes	
		C	c
Tina's gametes	c	25%	25%
	C	25%	25%

Figure H

		HAIR COLOR	
		Gary's gametes	
		D	d
Tina's gametes	d		
	D		

Figure I

		EYE COLOR	
		Gary's gametes	
		B	b
Tina's gametes	B		
	b		

Figure J

1. How many offspring will have curly hair? _____
2. How many offspring will have straight hair? _____
3. How many offspring will be pure for curly hair? _____
4. How many offspring will be pure for straight hair? _____